SOCIO-ECONOMIC, CULTURAL AND BIOLOGICAL FACTORS AFFECTING REPRODUCTIVE MORBIDITY AMONG CHENCHU TRIBAL WOMEN IN ANDHRA PRADESH

UGC PDF – RESEARCH REPORT

Submitted in partial fulfilment of the requirements for the Completion of the ***Post-Doctoral Research*** *in* ***Management Studies***

By

Dr. JANDAVATH RAMA KRISHNA NAIK
UGC – Post Doctoral Fellow
(No. F./PDFSS-2015-17-AND-10503)

Under the Mentorship of

Dr. K. JANARDHANAM
PROFESSOR
CANARA BANK SCHOOL OF MANAGEMENT STUDIES
BANGALORE UNIVERSITY
BENGALURU – 560056

Submitted to

ज्ञान - विज्ञानं विमुक्तये

UNIVERSITY GRANTS COMMISSION (UGC)
Bahadur Shah Zafar Marg
New Delhi – 110002

DECLARATION

I, hereby, declare that the thesis entitled, **Socio-Economic, Cultural and Biological Factors Affecting Reproductive Morbidity Among Chenchu Tribal Women in Andhra Pradesh,** submitted in partial fulfillment of the completion of the ***Post-Doctoral Research*** in Management to University Grants Commission (UGC) is the original work carried out by me under the Mentorship of **Dr. K. Janardhanam**, Professor, Canara Bank School of Management Studies, Bangalore University, and the same has not previously formed the basis for the award of any degree, diploma, associateship, fellowship or any similar title of recognition.

I do, further, declare that the text, figures or any other material taken from other sources (including but not limited to books, journals and web) have been acknowledged, referred and cited to the best of my knowledge and understanding.

Place:

Date*:* ***(Dr. Jandavath Rama Krishna Naik)***

ACKNOWLEDGEMENTS

In the process of bringing this thesis in its present form, many people were involved directly or indirectly. It is a pleasure to convey my gratitude to all of them in my humble acknowledgement.

I express my sincere thanks to **University Grants Commission (UGC),** New Delhi for awarding Post-Doctoral Fellowship under the scheme of UGC Post-Doctoral Fellowship for SC/ST Candidates for the academic year 2015-16, as this post-doctoral research report has been produced during my fellowship period at Bangalore University.

I extend my sincere thanks to **Bangalore University and Canara Bank School of Management Studies,** Bangalore University, Bengaluru for providing general and physical facilities such as furniture / space etc.

I express my sincere gratitude towards Bangalore University authorities **Hon'ble Vice-Chancellor, Registrar, Registrar (Eval), Academic & Syndicate Board** Members for providing opportunity to conduct my Post-Doctoral research.

I express my deep sense of gratitude and profound respect to my mentor **Dr. K. Janardhanam,** Professor, Canara Bank School of Management Studies, Bangalore University, Bengaluru, for the effort, great patience and immense care he has taken during the entire process of my post-doctoral research work. I acknowledge his valuable help and significant contribution from the very beginning of shaping the title of the study, to completing the procedural formalities of the project report submission. He has been continuously helping and encouraging me at all the stages of this study for ensuring quality and perfection.

My sincere thanks to **Prof. Y. Nagaraju**, Dean & Director, Canara Bank School of Management Studies, Bangalore University for their support and help in completing my Post-Doctoral research work successfully.

I wish to thank **Prof. Cynthia Menezes Prabhu, Dr. Ritika Sinha** and **Dr. M. Nirmala**, for their continuous support and encouragement throughout my Post-Doctoral research at the CBSMS, Bangalore University, Bengaluru.

I offer my sincere thanks to all the non-teaching staff (Mr. Praveen Kumar T M, Mr. Shivarudrappa, Mr. Manjunath & Mrs.Manjula) of Canara Bank School of Management Studies,

Bangalore University, for their immense help and cooperation meted out to me during the last three years

I am very much indebted to my dearest friends & colleagues, Dr. Sagar, Dr. Manjunath, Dr. Mahesh Kumar, Dr. Irshad Nazeer, Dr. Srinivas P S and Mr. Prabhudev for their company and wonderful time we shared together in the CBSMS, Bangalore University.

Lastly, I would like to thank my family for all their love and encouragement. For my parents who raised me with a love of social-science and supported me in all my pursuits. And most of all for my loving, supportive, encouraging, and patient wife Savithri whose faithful support during the final stages of this Post-Doctoral Research is so appreciated. Thank you.

Place:

Date: ***(Dr. JANDAVATH RAMAKRISHNA NAIK)***

CONTENTS		Page. No
	Declaration	*3*
	Acknowledgements	*4*
	Abstract	*7*
	List of Tables	*9*
	List of Figures	*9*
	Abbreviations	*10*
1.	**INTRODUCTION**	**12**
1.1.	Implications of Health in Less-Developed Countries	**13**
1.2.	The Relevance and Allusion Related to Fertility	**15**
1.3.	Infant Mortality, Postnatal and Neonatal Care in Developing Countries	**16**
1.4.	The Rise of Morbidity	**16**
1.5.	The Origin of Chenchu Tribes in South India	**17**
1.6.	Nutritional intake by the Chenchu tribe of Andhra Pradesh.	**17**
1.7.	Physical fitness of the Tribal Groups	**18**
1.8.	Medicinal Plants used for Remedial purposes by different tribes	**18**
1.9.	Insight and reason of fertility and mortality among the tribals	**19**
2.	**LITERATURE REVIEW**	**21**
2.1.	Fertility	**21**
2.2.	Fertility levels around the world	**21**
2.3.	Determinants of fertility	**22**
2.4.	Literature on Socio-Economic, Culture and Biological Determinants	**23**
2.5.	Research Gaps & Need of the Study	**28**
3.	**RESEARCH METHODOLOGY**	**32**
3.1.	Motivation of the Study	**32**
3.2.	Scope of the Study	**32**
3.3.	Objectives of the Study	**33**
3.4.	Theoretical Framework of the Study	**33**
3.5.	Hypotheses of the study	**33**

3.6. Research Design, Sampling Design and Sample Size 34

3.6.1. Instrument Development 34

3.7. Statistical Tools and Software used in the study 34

4. DATA ANALYSIS AND INTERPRETATION 36

4.1. Summary of Demographic Profile of the Respondents 36

4.2. Biological Determinants 37

4.3. Social and Cultural Determinants 40

4.4. Economic Determinants 43

4.5. Demographic Process 44

4.6. Impact of Biological Determinants on Demographic Process 45

4.7. Impact of Socio-cultural Determinants on Demographic Process 46

4.8. Impact of Economic Determinants on Demographic Process 47

4.9. Efforts do you make to avoid fertility, mortality and morbidity 48

5. RECOMMENDATIONS, CONCLUSION & LIMITATION 50

5.1. Recommendations 50

5.1.1. Recommendations to Families 50

5.1.2. Recommendations to Local Administration and Self Help Groups 51

5.1.3. Recommendations to the Government 51

5.2. Conclusions 51

5.3. Limitations of the Study 52

5.4. Future Scope of the Study 52

References 54

Annexure - Paper Publications

Annexure – Seminars, Conference & Workshops Certificates

DECLARATION

I, hereby, declare that the Post-Doctoral Research Project entitled, **Socio-Economic, Cultural and Biological Factors Affecting Reproductive Morbidity Among Chenchu Tribal Women in Andhra Pradesh,** submitted in partial fulfillment of the completion of the ***Post-Doctoral Research*** in Management to University Grants Commission (UGC) is the original work carried out by me under the Mentorship of **Dr. K. Janardhanam**, Professor, Canara Bank School of Management Studies, Bangalore University, and the same has not previously formed the basis for the award of any degree, diploma, associateship, fellowship or any similar title of recognition.

I do, further, declare that the text, figures or any other material taken from other sources (including but not limited to books, journals and web) have been acknowledged, referred and cited to the best of my knowledge and understanding.

Place:

Date: ***(Dr. Jandavath Rama Krishna Naik)***

ACKNOWLEDGEMENTS

In the process of bringing this thesis in its present form, many people were involved directly or indirectly. It is a pleasure to convey my gratitude to all of them in my humble acknowledgement.

I express my sincere thanks to **University Grants Commission (UGC),** New Delhi for awarding Post-Doctoral Fellowship under the scheme of UGC Post-Doctoral Fellowship for SC/ST Candidates for the academic year 2015-16, as this post-doctoral research report has been produced during my fellowship period at Bangalore University.

I extend my sincere thanks to **Bangalore University and Canara Bank School of Management Studies,** Bangalore University, Bengaluru for providing general and physical facilities such as furniture / space etc.

I express my sincere gratitude towards Bangalore University authorities **Hon'ble Vice-Chancellor, Registrar, Registrar (Eval), Academic & Syndicate Board** Members for providing opportunity to conduct my Post-Doctoral research.

I express my deep sense of gratitude and profound respect to my mentor **Dr. K. Janardhanam,** Professor, Canara Bank School of Management Studies, Bangalore University, Bengaluru, for the effort, great patience and immense care he has taken during the entire process of my post-doctoral research work. I acknowledge his valuable help and significant contribution from the very beginning of shaping the title of the study, to completing the procedural formalities of the project report submission. He has been continuously helping and encouraging me at all the stages of this study for ensuring quality and perfection.

My sincere thanks to **Prof. Y. Nagaraju**, Dean & Director, Canara Bank School of Management Studies, Bangalore University for their support and help in completing my Post-Doctoral research work successfully.

I wish to thank **Prof. Cynthia Menezes Prabhu, Dr. Ritika Sinha** and **Dr. M. Nirmala**, for their continuous support and encouragement throughout my Post-Doctoral research at the CBSMS, Bangalore University, Bengaluru.

I offer my sincere thanks to all the non-teaching staff (Mr. Praveen Kumar T M, Mr. Shivarudrappa, Mr. Manjunath & Mrs.Manjula) of Canara Bank School of Management Studies,

Bangalore University, for their immense help and cooperation meted out to me during the last three years

I am very much indebted to my dearest friends & colleagues, Dr. Sagar, Dr. Manjunath, Dr. Mahesh Kumar, Dr. Irshad Nazeer, Dr. Srinivas P S and Mr. Prabhudev for their company and wonderful time we shared together in the CBSMS, Bangalore University.

Lastly, I wholeheartedly extend my deepest gratitude and respect to my parents and family (Mom, Dad, Brother & Sister) for all their love and encouragement in all my pursuits. And most of all for my loving, supportive and encouraging wife Savithri & kids (Darshith &Yashika) whose faithful support during this Post-Doctoral Research is so appreciated. Thank you.

Place:

Date: ***(Dr. JANDAVATH RAMAKRISHNA NAIK)***

Dr. K. JANARDHANAM, MBA., M.Phil., Ph.D.
Professor & Research Mentor

Canara Bank School of Management Studies
Bangalore University
Bengaluru – 560 056

Cell: +91 9449234437
Email: prof.janardhanam@gmail.com

CERTIFICATE

This is to certify that the thesis entitled, ***Socio-Economic, Cultural and Biological Factors Affecting Reproductive Morbidity Among Chenchu Tribal Women in Andhra Pradesh,*** submitted to the **University Grants Commission (UGC)**, New Delhi in partial fulfillment of the requirements for the completion of Post-Doctoral Research in Management, is a record of original research work done by **Dr. Jandavath Rama Krishna Naik** during the period 2015 - 2020 (Full-Time) at the Canara Bank School of Management Studies of Bangalore University, under my mentorship and guidance. The research report has not formed the basis for the award of any Degree/Associateship/Fellowship or other similar title of any candidate of any University.

Dr. K. JANARDHANAM

ABSTRACT

Scheduled Tribes live in unique physical, socio-economic and cultural environment, isolated from general population. The tribal population is at a higher risk of under-nutrition, because of the socio-cultural, socioeconomic and environmental factors influencing the food intake and health

seeking behaviour. Inadequate health care facilities, illiteracy and socio-economic disadvantage among tribal populations perpetuate the vicious cycle of reproductive morbidities.

The Andhra Pradesh (AP) state have 34 tribal ethnic groups constituting about 5.53% of the state's population. Among these, Chenchu tribes were considered as forest dependent tribes and about 64% of these are below poverty line. They depend on natural resources for 90% of their food supply and their economy is closely associated with the ecosystem and the habitat of that region. Health concerns vary widely among the tribes, however, health indicators fall below that of the population living in urban areas which could be due to inaccessibility, and also to other reasons such as literacy, personal hygiene and economic status and so on.

The present study was conducted among the Chenchu tribe of Andhra Pradesh, India. The Chenchu, one of the 34 scheduled tribes of Andhra Pradesh, India, are mostly distributed in Srikakulam, Vizianagaram, Visakhapatnam, East Godavari, West Godavari, Prakasam, Nellore and Kurnool Districts. The data was collected from 424 married women in the reproductive ages (13-45 years) from a total of 42 *Chenchu* villages (*Gudems*), of 8 districts through intensive demographic research in order to understand their overall reproductive and child health status.

The population of Chenchu tribes in both state of Andhra Pradesh as per the 2011 census is 47315, of which the male population is 23847 and the female population is 23468. The growth rate in population has been 6% from 2001 to 2011, as the total population in 2001 was 49232.The Chenchus population pyramid presents youthful population with high fertility, typical of developing countries. Sex ratio of the present study (998) is slightly higher than the Indian average (940). The overall literacy percentage for the Chenchu tribe stands at 40.6%, of which the male literacy is 47.3% and that of the female is 34%.

The main occupation of the Chenchu tribe is primarily hunters and gatherers, about 96.39% of the households falling below the PCAI less than 5,000/-. The average age at marriage (16.42 years) is well within the legal age at marriage. Most of the Chenchu women not aware about the modern birth control measures.

The crude birth rate (CBR=20.1), total fertility rate (TFR= 5.26) of the Chenchu were found to be less than that of Andhra Pradesh state (CBR=20.4; TFR= 5.4) and general fertility rate and child women ratio (GFR = 89.64; CWR = 381.8) of Chenchu were found to be lower than that of the state Andhra Pradesh state (GFR = 116; CWR = 448.8) and India (GFR = 144; CWR = 547.9). The mean live birth is highest among those women who married at ages 15-19 years which gradually decreases with an increase age at marriage. It is also highest among women whose age

at conception is 15-19 years and gradually decreases with the increase age at first conception. This clearly indicates that age is one of the factors influencing fertility.

Crude death rate is found to be 11.7/1000 which is higher as compared to the crude death rates of Andhra Pradesh (7.4) and India (7.3). Of all the prenatal mortality, 66.67% are found to be spontaneous abortions. And spontaneous abortions are higher among the mothers who are engaged in daily wagers. Whereas, the percentage of induced abortion and stillbirths are found to be highest among the mothers. And the highest number of postnatal deaths is found among the housewives.

Out of 424 married women, 31.67% reported symptoms of any reproductive tract infections and a majority of women (62.68%) who reported any reproductive tract infection did not receive any treatment.

34% of Chenchu women reported regular intake of IFA tablets during pregnancy. Improper intake of IFA, TT doses among Chenchu women is probably due to the lack of awareness of the benefits of dietary supplements. Excessive fatigue and eclampsia are the main problems reported by women during pregnancy. Among Chenchu women, 22.26% of women were undernourished (BMI< 18.49 kg/m^2).

This research report is an attempt to examine the fertility differentials among Chenchu women. More specifically, it aims to investigate whether socioeconomic, cultural and biological factors have an impact on reproductive morbidity in the Chenchu Tribe context. This report also aims to guide reproductive health program planners and policymakers to understand various factors influencing fertility in order to assist in the implementation of a reproductive health program that will decrease fertility as well as infant and child morbidity and mortality.

LIST OF TABLES

Table No	Content	Page. No
Table 1.1	Fertility Rate in Different States of India	15
Table 1	Model Fit Indices – Biological Factors	37

Table 2	Validity Measures of Measurement Model – Biological Determinants	38
Table 3	Model Fit Indices – Social and Cultural Determinants	38
Table 4	Model Fit Indices – Social and Cultural Determinants	41
Table 5	Model Fit Indices – Economic Determinants	42
Table 6	Results of Structural Equation Model: Impact of Biological Determinants on Demographic Process	44
Table 7	Results of Structural Equation Model: Impact of Socio-Cultural Determinants on Demographic Process	45
Table 8	Results of Structural Equation Model: Impact of Economic Determinants on Demographic Process	46

LIST OF FIGURES

Figure. No	Content	Page No
Figure 3.1	Theoretical Framework of the Study	32
Figure 1	Measurement Model (CFA) for Biological Determinants	37
Figure 2	Measurement Model for Socio-Cultural Determinants	40
Figure 3	Measurement Model for Economic Determinants	42
Figure 4	Measurement Model for Demographic Processes	43
Figure 5	Structural Equation Model for Impact of Biological Determinants on Demographic Process	44
Figure 6	Structural Equation Model: Impact of Socio-Cultural Determinants on Demographic Process	45
Figure 7	Structural Equation Model for Impact of Economic Determinants on Demographic Process	46

ABBREVIATIONS

Abbreviation	Expansion
AGFI	Adjusted Goodness of Fit Index
AMOS	Analysis of Moment Structures
ANM	Axillary Nurse Midwifery

AP	Admission Process
ASSOCHAM	The Associated Chambers of Commerce and Industry of India
AVE	Average Variance Extracted
BI	Behavioural Intention
CARE	Credit Analysis & Research Limited
CBHI	Central Bureau of Health Intelligence – India
CCI	Corporate Catalyst India
CFA	Confirmatory Factor Analysis
CFI	Confirmatory Fit Index
CHC	Community Health Centre
CI	Census of India
CII	Confederation of Indian Industry
CR	Critical Ratio
EASS	Expected Assurance
EEMT	Expected
EFA	Exploratory Factor Analysis
ERAB	Expected Reliability
ERES	Expected Responsiveness
ETAN	Expected Tangibility
FS	Food Services
GDP	Gross Domestic Product
GFI	Goodness of Fit Index
GNM	General Nurse Midwifery
GTI	Grant Thornton-India
MCI	Medical Council of India
MoHFW	Ministry of Health and Family Welfare
MSPI	Ministry of Statistic and Programme Implementation
NABH	National Accreditation Board for Hospitals and Healthcare Organisations
NFI	Normative Fit Index
NHP	National Health Policy
NHP	National Health Policy
NIHFW	National Institute of Health and Family Welfare
NRHM	National Rural Health Mission
NS	Nursing Services
NSDC	National Skill Development Corporation
WHO	World Health Organization

Chpater-1
INTRODUCTION

Chpater-1
INTRODUCTION

In chapter-1, we have highlighted the important concepts related to the aspects of fertility, mortality and morbidity of tribal groups in Andhra Pradesh. Now it is easy for you to understand the determinants of population change, namely births, deaths and migration. Technically, i.e. in demographic terminology, birth rate is called 'fertility rate' while death rate is called 'mortality rate'. Since the changes in population basically take place due to births, deaths and migration, these are called determinants of population change. Of course, there are some other factors such as natural calamities which also affect the populations occasionally.

We need to know about all these determinants. Therefore, in the present Chapter-1, our discussion will center around fertility, mortality and migration with emphasis on types, measurements/indices as well as factors influencing them, among other things.

The freedom to well-being is the prime most and the basic of all necessities of human. The establishment enabled by the World Health Organization (WHO) states that the liberty to the maximum achievable health is the elementary right of every individual without discriminating on the grounds of race, creed, political opinions, monetary and social aspects. It indicates that every person are entitled to survive in an ambience sans health hazards and also to have adequate medical services that can assist in minimizing the prevailing health issues, keep a check on ailments and uphold the good health status of the people.

On an unfortunate side, women are less deprived as compared to men in terms of communal and fiscal determinants. In several groups, women are denoted as vulnerable parts of the society as they incapable to transform their miserable lives by breaking the shackles of dearth and develop their health and eminence of life. Based on the empirical studies, it is seen that the welfare of the children, family, and the community depends on the wellbeing of women. Even though, amidst all technological and medical advancement, women are seen to be languishing due to fatality and morbidity. There have been considerable changes noted as the necessary predictors of health but the condition of women health situation is deteriorating day by day.

The condition of a women reproductive system should be necessarily analyzed in order to keep a check on the productiveness of the community. The reproduction cycle of women is manipulated by the custom of the society. In a third world country like India, reproduction is facilitated after nuptials while getting pregnant before that is considered to be social stigma. The problems that

are dealt by women were usually associated with their maternal health. However, the modern day approach to ascertain the safety of motherhood is determined by the female's health before her birth till she hits adulthood and also upon certain monetary and communal aspects.

1.1 Implications of health in less-developed countries

The condition is even more severe in the third world countries like India. The country holds a wide variety of demography that has led to local inconsistency in the sphere of expansion and welfare. The enormous regional assortment crosswise in the Indian states are not only based on the demographic parameters, but it also takes the wide geological, communal, fiscal and political pointers with Bihar, Madhya Pradesh, Rajasthan, Uttar Pradesh, Orissa, Assam and West Bengal creating a large section of numerically susceptible states in terms of crucial infant fatality rates, accurate age of marriage, rate of education, per capita income, fraction of underprivileged, arrangement of manpower, family development performance and many more. Keeping all the predictors in mind, it was seen that the southern states in the country along with Maharashtra, Himachal Pradesh and Gujarat are known as the progressive states.

A contraceptive technique uprising has helped majority number of people but the mission is still unaccomplished. The stipulation for superiority is replacing the aspiration for amount of human production. The intimate fitness is considered the vital most psychosocial element of health and welfare. A productive advancement has been fundamental to the surfacing of the women behind the mother. A remarkable modification in human's generative action started back in the nineteenth century, northwards of the orb. The later part of the twentieth century has been a boon to the southern part of the country. The world sooner indulged into an unknowing plight of decrease in fertility. The mankind is going through an exceptional reduction in fertility. The level of productiveness is calculated by pointers as the total fertility rate (TFR), that shows the average number of babies conceived by a woman in her productive tenure only if the present fertility structure is unaltered.

The initiation of the contraceptive technique empowers women to give birth by choice and not due to circumstances. Births can be intended to take place at most favorable time of childbearing to assure no health complication to both the mother and the baby. The freedom of preference and approval reinforce the family to devote more time, money, and energy on the small number of children and ensure a better future for them. The advent has also been a blessing into the lives of women who can now spend more time shaping their careers and less on childbearing and its following repercussions. The present situation is a progressive phase that is interceded by science

and technology in order to re-structure the law of nature. Our productive mechanism is being willingly tailored to impressive modern methods.

Women, on an average can remain actively productive for a period of 30 years as imposed by the law of nature. However, if a couple plans for a limited family, they have to be dependent on contraceptive usage to remain sexually active and avoid procreation. The method of contraceptive has the most crucial role to play in the process of breeding. The thoughtful switch to the use of contraceptives has made an effectual impact on the lives of human. The pervasiveness of the birth-control technique in developed nations is comparatively higher than developing nations.

A technical insurgency in contraceptive knowledge in the last few years has assisted a major chunk of the population to achieve their target to normalize and manage their fertility. The succeeding outcome of science has been experienced by all strata of people spread all over the world, from the posh urban areas Manhattan, to the semi-urban regions in Latin America and also in the rural parts of India. Every individual belonging to different cultural, spiritual and educational background and wants to delay their pregnancy or want to restrict their childbearing limit adapts to this strategy in order to change their course of life. The significance of contraceptive started seeking fame in the middle of the century otherwise it was only used for ineffective copulation before that.

There have been seasonal procedures adopted by science to develop a better version of the contraceptive upheaval. With progress in cell and molecular natural science and in biotechnology have created new perspective for the remedial and natal sciences, the arena of birth control investigation and enlargement is yet to profit from the prospects offered by these expansions. The succeeding contraceptive expertise should not lie in-between the barrier of numerical and science but should entirely fulfill the requirements of women and men who have used the previous technique and were still displeased with the first invention.

Chenchu women

1.2 The relevance and allusion related to fertility

Fertility is known as a biosocial occurrence and its conversion is seen as a uni-way mechanism that ranges from high to low and vice-versa based on definite continuum. The biggest issue is to know the stipulated time of the onset of fecundity rejection.

Table 1.1 Fertility Rate in Different States of India

State	Fertility Rate	Population (in million)
Maharashtra	1.8	112.37
West Bengal	1.6	91.28
Andhra Pradesh	1.8	84.58
Tamil Nadu	1.7	72.15
Karnataka	1.9	61.10
Odisha	2.1	41.97
Kerala	1.8	33.41
Punjab	1.7	27.74
Delhi	1.7	16.79
Jammu & Kashmir	1.9	12.54
Himachal Pradesh	1.7	6.86
India	**2.3**	**1210.2**

Source: Nagarajan, R. 2016, The myth of India's population explosion. India Times.

Table 1.1 reflects the fertility rate in different states of India. It was noted that Odisha has a high rate of fertility as compared to its population whereas Maharashtra has been readily accepting contraceptives as a way of life.

Contraceptive and level of fertility have an opposite relation. The grave reasons of high growth of fertility among citizens of Nepal are leading to situations like excessive population and the mass rate of unemployment, improper medical amenities, scarcity in educational apparatus, low emergence of better family planning techniques, increasing difficulties to meet the requirements of proper family planning procedures and other equipments. Several surveys done on the health indicators of Nepal reveal the determinants that augment to the high productive incidence among the women in the country. The aspects involve parameters like the age during first marriage, age

of the initial intercourse and intensity of involvement in sexual activities whereas other factors can be post-partum amenorrhea and self-denial from sexual affair **(Baral, 2017).**

1.3 Infant Mortality, postnatal and neo natal care in developing countries

The first-born and multiple born have a slightly higher exposure to mortality in comparison to other babies. The fatality rate of the most vulnerable criteria of babies can also be associated with the age of the mother as it is not safe for too young and too old women to have a completely safe delivery. The amalgamation is most expected to show not only the consequence of birth order but also the age of the women who intends to give birth. Therefore, it was clearly noted that there was a positive relation between the birth order and infant mortality rate at birth.

1.4 The Rise of Morbidity

Children who have been born in raw and semi-raw houses are more likely to suffer from the ailment than the ones who resides in fully constructed houses. The study found that the frequency of lesser commonness of morbidity among infants below the age group of 5 who have a better living condition and have learned guardian assistance. Offspring dwelling in perfectly constructed houses have a better socio-economic that in turn guarantees improvised health situations. However, the research illustrates lesser frequency of morbidity due to ARI, diarrhea and every infant who have received immunization **(Baruah, R., and Borah, M, 2017).**

The cases of illness of children who are blessed with safe drinking water and hygienic toilet facilities are less as compared to the ones who are not privileged enough to get the basic amenities. Nonetheless, the alliance was seen to be momentous in the current study although strapping union of defective decline removal with Diarrhoeal cases has been accounted in literature. It stated that unacceptable excreta discarding and paucity of adequate drainage method was connected with 47 percent amplified in diarrhoea among children. Supplementary to it, NHFS-3 statement for Orissa cited that 12 percent of children had diarrhoea in a couple of weeks foregoing the inspection and out of which less than half of children were not treated. A major chunk of children with the issue of diarrhoea got little or no liquid based food that can cause dehydration and a minor portion under the 5 years old have indication of severe respiratory disease. **(Rayhan, Khan, and Shahidullah, 2007).**

1.5 The origin of Chenchu tribes in South India

The Chenchus are a prehistoric group that is majorly found in the stretch of Andhra Pradesh. It has been proclaimed that they have been survivors of Kurnool caves and foothills of Nallamalai. The aforementioned tribe sought to agriculture due to the efforts made by the Indian administration. In the primitive times, they were usually seen hunt, fishing, collecting the spread of the society in the stretch of Andhra Pradesh to Madhya Pradesh. The Chenchus reside in the regions of Kurnool cavies since the time of Upper Paleolithic. Providing the lodging facility given to humans is the most basic amenities and Chenchu stays in Kutcha (Huts) but the houses provided under the government schemes were not appropriate for their survival. **Hygiene and sanitation of Chenchus**

The Chenchus believe that hygiene is the ultimate process and the only equipment that assists in keeping the ambience tidy, particularly the eradication human generated garbage. According to them, cleanliness is efforts done to disinfect own self and also the living and working area in order to eliminate the risk of maladies. This tribe has different rituals to be followed when they have their child's first growth of teeth. Children are born in a rural giving minimal focus to their sanitation while they play. There are usually 3-4 children born in a family before the birth giver can go for sterilization. The government has found a scheme to reward with a sum of 1000 to the family who do this act in order to boost the idea of limited family.

1.6 Nutritional intake by the Chenchu tribe of Andhra Pradesh

The Chenchu follow a very basic and staple diet to maintain a healthy lifestyle. They feed on a very small amount of fruits like banana and castle-able which is roasted in fire. The Chenchus generally follow a combination of food for three times of their diet. It is either rice or chapatti or curry. They add a lot of chilies and pepper mainly because of its medicinal properties. They add spices not only to make their food healthy but also to add flavor to the dish.

Among all the items that are consumed by the Chenchus, rice is the first dish that is taken by them as a compulsory meal. They are also a firm chapatti lover and they use the dough of janna and jawar. However, Chenchus do not have the advantage of extracting it so they lay it all across the road and moving vehicles thrash it to be used by them. **(Ivanov, 2014).**

1.7 Physical fitness of the tribal groups

A study conducted on the Chenchus of the Mahabubnagar and Kurnool districts of Telangana and Andhra Pradesh on a health awareness campaign, it was seen that the aboriginals are diagnosed with severe maladies by the health experts. In mandatory cases, important medications were distributed among patients who needed acute care. It was exposed that 61.39 per cent of the Chenchus have normal weight, 27.21 percent are below the average weight 10.12 percent of them are above the required amount of weight. There is a clear indication that Chenchus usually don't suffer from blood pressure problems as 70.83% have normal pressure, 15.83% of them low blood pressure while only a negligible percent of 6.66 are seen to be hypertensive. Their natural way of living with absolutely no artificial food or excessive sugar intake proves that they have their blood sugar levels at a normal range.

1.8 Medicinal plants used for remedial purposes by different tribes

The connection among humans and plants is an ancient occurrence. Man has been accustomed to use plants for consumption, medication and recreational purposes since the primitive era. It is also seen that more than two-thirds of the world still relies on vegetation to derive the wellness of health. The conventional kind of medicines were the sole belief of 70%-80% of the Indians back in the time, However, things changed with technological intrusion and the world started switching its references. Sadly, the ethnic groups could make a move from their rigid perceptions **(Rao, 2019).**

The ethno-medicinal exploration performed in the Giddalur forest illustrated that 30 varieties of foliage are utilized by the Chenchus for the recovery of Diabetes. The medicinal properties that are extracted from different parts of the plants are exercised to advance numerous therapeutic arrangements by decoctions, blend, maceration, rubdown and yielding. The decoction is the key process that has been adopted by curers. The drink prepared is supreme medicine. The healing process for diabetes is done in two ways: the conventional doctors who use herbs from different sources to make a mixture or a drink that would eradicate the malady naturally. The other kinds of doctors are the ones who cling to modern methods for treatment. The results show that there is a frequent use of remedial properties of plants, analysis is needed on the pharmacological effectiveness of diverse medicinal plants. In addition, a lot of curative uses are said to be widespread to definite tribes. Accordingly, significant concentration has been drawn towards the use of nature friendly plant based crops for the removal and alleviation of Diabetes. However, the

skills of the tribals towards the accurate knowledge of these plants remain unknown. **(Vali, et al. 2018)**

The superiority and reliability of the botanical extract highly depends on the plant used for the process, like the area where it is bloomed, the time of its growth and the elevation at which it has been grown. Additionally, the preliminary handling and the respective storage can hamper its excellence.

1.9. Insight and reason of fertility and mortality among the tribals

In spite of hardships and restrictions of important information related to the tribals, the present study shows some amazing revelations. Firstly, even though the fecundity and transience rate for few tribes and spiritual groups keeps on fluctuating along with the non-tribal groups, India's total tribal populace have very less mortality and fertility in comparison the other proximate non-tribal groups.

Numerous communal and spiritual way of life of the tribals is entirely in support of their maintenance of minimalism in terms of mortality and productiveness. Notwithstanding the accumulative prototype of demographic degree of difference is in favor of the indigenous, there is a lucid signal that the Indian tribals will be lagging behind from the non-tribals because of their low of pace of fertility.

Chenchu Women

Chapter - 2
LITERATURE REVIEW

Chapter - 2
Literature Review

The Chapter-2 presents a critical review of relevant literatures. The second section discusses the fertility theories guiding this work. Their appropriateness and challenges are also highlighted. The third section presents the frameworks that will be used in the analysis of this study and section four presents the hypotheses to be tested in the study.

2.1 Fertility

Fertility measures lifetime reproductive capacity of a woman. Therefore, fertility is demographic phenomenon observed in terms of live births. However, the number of births a woman will bear during the whole period of her reproduction career is a result of a complex and dynamic interaction of a biological process with socio-cultural, economic and environmental factors (Bongaarts, 1978). Fertility is one of the most important components of population change hence; it is an important subject for demographic analysis. Other components are deaths and migration (PRB, 2005).

2.1.1 Fertility levels around the world

2.1.1.1 General fertility levels and trends

Over the past few decades, the world has experienced more rapid and more extensive demographic change than in any other comparable period in history. The best known example of this change is the rapid increase in human numbers. The world population today stands at 6.5 billion, which is 4 billion more than in 1950, and growth will continue for several more decades. There are also a number of other important demographic trends. Around the world, women are having fewer children, people are living longer and healthier lives, increasing numbers of migrants are moving from one country to another, family and living arrangements are becoming increasingly diverse, urbanization is proceeding at a very rapid pace, and populations are aging. This note discusses several of these developments, in particular, the causes of population growth, population aging and policy responses (TDHS, 1997). World population grew slowly from 1 billion in 1800 to 2.5 billion in 1950. Since then, population growth accelerated and today we stand at 6.5 billion and the United Nation (UN) expects this total to grow to 9.1 billion in 2050. The absolute increments in world population size remain large, about 75 million a year.

Population trends vary widely among regions. Virtually all future growth will occur in the developing world, that is, Africa, Asia, and Latin America, while the developed world is expected to see little change. Asia is, by far, the largest region. It had a population of about 1.3 billion in 1950. Today, it stands at about 3.7 billion almost tripling-and it is expected to add another 1.5 billion people in the next 50 years, primarily in already very densely populated South Asia. Africa was one of the smallest world regions in 1950, but nearly quadrupled in size to three-quarters of a billion, and it is expected to double again by 2050. This growth is projected to occur despite Africa‟s large AIDS epidemic. Latin America is smaller than the other two regions in the developing world, yet it has experienced rapid growth in the past, which will continue for decades. In contrast, the population of the developed world as a whole is expected to remain near its current size in the future, with modest increases in the United States being offset by declines in Europe and Japan. These differential growth rates among regions imply that the world will become increasingly African, Asian, and Latin American, and the proportion of the world‟s population in Europe, North America, and Japan will decline (ib.id). Rapid urbanization is another key trend in the developing countries. In the past, most of the population lived in rural areas, but rural-to-urban migration is now so rapid the rural population is expected to level off in the developing world in the next few decades. The 6.5 billion people that were added to the planet in the past were absorbed in both the developed and developing worlds, and within these regions, growth occurred in rural and urban areas. Therefore, the next 2.6 billion people to be added to the planet will end up in cities in the developing world, and many of those inhabitants will live in shantytowns and slums in very difficult conditions and with very limited infrastructure and services.

2.2 Determinants of fertility

2.2.1 Proximate determinants of fertility

It may seem superfluous to state that a birth is the result of the exposure to intercourse, the successful conception, gestation and parturition. In particular, fertility is directly determined only by a few variables: provide a link between social, cultural and economic factors on one hand, and the physiological process which ultimately determines fertility on the other hand. As noted by Freedman, the proximate variables stand between fertility and all other proceeding variables. They immediately determine fertility, and all other variables act through combinations of them (Freedman, 1986). Davis and Blake (1956) and Bongaarts (1978 and 1982) proposed sets of these variables.

2.3. Literature on Socio-Economic, Cultural and Biological Determinants

Beck et al. (2010) in their study examines and concludes that premature birth has been noted to be the most significant prenatal physical condition throughout the world because of the amalgamated death rate, the short and long span of unwholesomeness and the involvement of the monetary matters in the treatment and medical techniques.

Shukla (2016) mentions that the women in India have progressed a lot in terms of career other social and cultural requirements. Nonetheless, they still lack behind and are ignorant about their health and vigor. The negligence and unawareness continues until the time their health issues become inescapable, incurable and fatal.

Pradhan (2013) opines that the general viewpoint, tradition and practices that are associated with wellbeing and illness have been seen to be closely linked with the healing of malady. The health related issues of the villagers, especially the ethnic group of the society needs to be brought under notice because the tribals have idiosyncratic health crisis that are ruled by their conventional thoughts and customs.

Jat, Nawi and Sebastian (2011) suggests that advancing the maternal wellbeing has been considered to be one of the eight Millennium rising objectives. It is extensively customary to say that one of the uses of maternal services is to improve the rate of morbidity and fatality. The usage of maternal measures is a multifaceted occurrence and is affected by a lot of determinants. The goal of this research is to approximate the consequences of people, society and regional aspects on the consumption of maternal services with extra orientation to antenatal care (ANC), knowledgeable caretakers at birth and postnatal care (PNC).

Inamdar, Sahu and Doibale (2013) illustrate the factors related to women health that has been overlooked because of the conventional method used for the women health exploration. A noteworthy explanation exists in considering the determinants that affects the gynecological morbidity and the outcome of it in females' lives.

Hanson, Smith and Zimmer (2015) stated that as far as women are concerned, minimum age of child birth, high similarity or having a premature or heavy birth weighted babies are linked with amplifies perils of comorbidity. The men in this case are exposed to co-morbidity due to minimum age of first birth and children and having an infant with irregular birth weight.

Jeffries (2012) in his paper showcases some noteworthy health effects that affect African women and investigates how several single fitness issues penetrate and clash to form difficult health

apprehensions for females. It explains the thought that to effectually point a black women's physical wellness, her psychological, spiritual, communal and fiscal health should be measured along with corporeal situation.

Chakrabarti (2012) suggests that cure and effectual management of breathing related illness Diarrhea is based on different personal, domestic and societal aspects. The goal of this research is to approximate the function done by these aspects in finalizing the rate of the maladies and consumption of strict medical facilities for children below three in the nation. It was seen that females with higher edification and independence in terms of taking decisions, manage domestic chores and owns total liberty to shift beyond the boundaries of her family responsibilities exercise a relevant authority on the prospect looking for care.

Steckel (2008) attempts to investigate the distinctive and precious aid of four genetic parameters-life anticipation, fatality, physique, and various aspects of emaciated leftovers in order to manipulate the intensity of alterations in the human lives.

Singh and Kumar (2013) elaborates the commonness of postpartum fatalities and aspects related with the management seeking outbursts between presently married females within the age bracket of 15-49 dwelling in the less developed parts of India. Catering antenatal and after delivery concern and assuring the proximate medical facilities run by the government to enhance the wellness of rural women can accentuate the probability of concern for postpartum morbidities.

Cardoza (2005) in his studies confirmed mate aggression during the period of pregnancy as one of the most upsetting situation with multiple effects for both the victim and the bearing child. The occurrence of the counterparts 'hostility is higher in Nicaragua, and is frequently found to be harsh and recurring and risking the lives of women and the child.

Sanneving et al. (2013) states that the Millennium Development Goal (MDG5) is mainly stressed on minimizing motherly productiveness rate and attaining worldly admittance to reproductive care. The country has tried extensively to attain MDG5 and in few parts advancement has been noticed. The development has been rough and unbalanced however; many females still don't get the right to maternal and reproductive wellbeing. The five most crucial aspects that came out from the investigation and is needed to understand the impartiality in the country is: financial position, sex education, impartation of knowledge, communal category (registered caste or tribe), and age (adolescents).

Birdi, Joshi, Kotian and Shah (2014) explored that undernourishment was a relevant issue for all infants between 1-5 years and among adults who are more than 20 years old. A very common mistake that leads to mulnutritioned children are the flawed practices done on child welfare. A major cause for malnutrition in children was faulty childcare practices.

Dhak (2011) in his study explores the factors for getting anti-natal care and institutional delivery in connection to deteriorate motherly fitness and proper use of the apparatuses and its association with the socio-economic position of the consumers and also the availability of the elements. The result shows that the socioeconomic substances reports for an immense use of maternal fitness and the convenience to the medical amenities. Additionally, it was also noted that external motivation hardly worked for women who were not spirited by their motivated by their counterparts and in-laws.

Mishra (2012) contemplated that physical and mental wellbeing is the crucial most factors or a progressive community. The importance of health among the Adivasis people revolves around the insight and commencement of their own customs with less importance given to the modern medical facilities.

Chander (2012) defines this as an inter-customary research in order to ascertain the cases of severe and persistent morbidities in the populating consisting of adults. The research reflected that there have been more cases of acute morbidity because of ARI many cases of Diorrhoea.

Shahrawat, Meitei and Joon (2014) say that antenatal time span is important for the existence of both the mother and the infant. The impediments arousing out of the time can lead to maternal fatality and is usually identified and controlled effectually during that period only. The societal and fiscal discrepancies can highly influence the treatment done during the anti-natal time based on the condition of the pregnant mothers. Less than half of the pregnant women, who suffered from the aforementioned malady, preferred healing. A thorough and ANC checkup during pregnancy was less prevalent among the village women because of their poor financial condition, less education, social obsoleteness and other spiritual groups. Many ladies took assistance from medical providers and more than half of them advanced a local health organization for care.

Tiwari and Devi (2014) defines the aim of the study is to investigate the use of restricted social registration data to consider the aspects of neonatal fatality in the state of Sikkim. There were three changeable that were taken into notice namely age, gender and the kind of dwelling of the mother.

Kamal (2012) in his paper excavates the effect of decrease in child marriages and positive modification in the productive results of the Bangladeshi women. It said that almost 82% of the females who were aged between 20-50 years were seen to be married at an early age of 18 and 63% of them were married even before they hit puberty. The cases of child marriage were considerably low among young women within the age bracket of 20-24 years in comparison to the elder women. Amongst others, the edification of females was proved to be the most noteworthy solitary aspect of child marriage and led to its decease. Augmented enforcement of the remaining policies is vital for the eradication of child marriage. Unique campaigns have to be conducted to engage girls in school for longer duration and also to increase the girl's age for marriage that can help in decreasing the complicated reproduction results in Bangladesh.

Prusty (2014) found that he education and skill about the utilization of contraceptive is comparatively lower in the tribal women as compared to the non-tribals. Less recognition due to the fear of the various health issues, convenience and deficiency in proper knowledge of contraception are the prime causes for not applying it into practice.

Sheheli (2012) found that in a male dominated country like Bangladesh where men have the ultimate authority to manage the house and also the community as a whole while men are within the 4 walls of her room. Females face more incidence of ill-treatment as they are in a lower position than men and also have more cases of paucity.

Basu (1993) explains the health position of the ethnic females in terms of parameters like sexual rate, age of nuptials, productiveness, transience, life anticipation, dietary condition, mother and infant fitness exercises, sexually spread maladies, hereditary discrepancies and lot more. The physical wellness of the clannish female is much degraded as compared to the health status of a usual Indian female in terms of these determinants. Disparity in skills associated with the fitness of ethnic women has been recognized and a course of plan has been undertaken to enhance the operation.

Kavitha (2010) says that the recent exploration focuses on the importance of the tender most conceiving age on the occurrence of sexually transferred illness and lack of blood. The analysis done reflected that females who had given birth to babies in their adolescent years have been more exposed to STDs and anemia than the ones who've given birth in their adult age. The study concluded that there were more possibilities of these diseases on pubescent women than mature women in urban settings.

Singh and Rajyalakshmi (1993) poorer than the universal health of women but also from the health of ethnic men. It mainly happens due to excessive labor, assault of sexually demarcated market activities practiced among the aboriginals, lack of education, lack of a proper livelihood, elevated productiveness, lofty undernourishment on girls turned women recently. The research done on the young women helps in improving the condition of clannish women.

Kumar, Prabha and Chiranjeevi (2015) states that the Indian tribes are an assorted group of people It is multi-dimensional occurrence encircling the incapacity to fulfill the necessary desires, scarcity of management over reserve, low educational and knowledge, deprived physical condition and underfeeding, deficit in protection, poor hygiene, defenselessness to distress, aggression and misdeed, restriction in political inclination, defeating dearth and voicelessness. The confrontations striking the epitome of poverty are diverse and multifaceted.

Basu (2000) shows the extensive deficiency, scarcity of knowledge, disnourishment, dearth of hygienic drinking water, lack of clean living environments living conditions, deprived maternal and child physical fitness and unproductive treatment of nationwide wellbeing and dietary services have been noticed in a lot of empirical researches as possible adding aspects to the dreary health situation that is still existing among the tribal population. The current study mainly turns the spotlight on various engaging elements like child fatality rate, life expectancy, hereditary disarray, sexually transferred ailments, dietary position, forest environment and medical services that accounts for the improved health and fitness of the tribals.

Zahan (2014) states that females in the third world countries are often recognized in a feeble state and are always overloaded with household tasks. Most of the cases are found to be anemic and they suffer from undernourishment parasitism. Specifically, during the months of conceiving and post-delivery, there are cases of iron deficiency and other health issues. Aged females and males suffer from discrete reproductive and intimate health problems that are quite insufficiently looked after. Primarily, female's health condition is deteriorated by multifaceted natural, societal and intellectual reasons that are interconnected and can only be solved in a inclusive method. Reproductive fitness is unwavering not only in the superiority and accessibility of health care but also the socio- economic progress level and female's position in the society.

Adler and Newman (2002) mentions that the social and economic position is determined by three key aspects, they are: Physical fitness, ecological vulnerability and the health conduct. Consequently, the unending pressure that comes with low economic and societal involvement can sometimes be the reason for morbidity and fatality.

Matthews Ribar Wilhelm (1997) portrays the consequences of income, welfare strategies and availability of medical care, family planning, abortion service providers have on the rate of abortion and infant birth. The cases of abortion are low in many states that have a limited framework policy and are not very efficient in providing abortion service. It was also noted that there was an augmented child birth in places that have pricey contraceptive apparatus and the family planning is not given much relevance. Monetary benefit had a positive relationship with birthrates as every successful man and woman were seen to be having kids while a deduction of a meager amount led to no birth at all. However, there was no link between the paid wages and the rate of abortion.

Sensoy, Korkut, Akturan, Yilmaz, Tuz and Tuncels (2017) stated that everybody has the liberty to plan their own children without any pressure or time restraints hindering their way. They should always be ready and fueled with knowledge regarding the existing medical amenities, the process and its repercussions, to the fullest. Scarcity of information regarding the steps of family planning, incorrect behavior towards the techniques and consecutive accidental pregnancies can accelerate the mother and baby mortality rate and is also seen to be a beaming issue in many countries. Enthusiastic couples eager to learn contemporary methods and are aware to use them in a positive manner will not only reduce risk of losing lives but will give way to a healthier community. Therefore, it is always vital to inspect the recent techniques and methods before choosing an appropriate one.

2.5. Research gap and need of the Study

The tribal population groups form the 7.95 percent of the total population of India. These tribal groups inhabit widely varying ecological and geo-climatic conditions (hilly, forest, tarai, desert, coastal regions, etc.) in different concentrations throughout the country and are distinct biological isolates with characteristic cultural and socioeconomic backgrounds. Tribal groups are generally homogeneous, culturally firm, have developed strong magico-religious health care systems and they wish to survive and live in their own style.

A tribal woman occupies an important place in the socio-economic structure of her society. The Dhebar Commission Report (1961) mentions that the tribal women are not drudge or a beast of burden, she is found to be exercising a relatively free and firm hand in all aspects related to her social life unlike in non-tribal societies. The tribal women in general and in comparison with castes, enjoy more freedom in various walks of life. Traditional and customary tribal norms are comparatively more liberal to women. And the status of women in a society is a significant

reflection of the level of social justice in that society. Women's status is often described in terms of their level of income, employment, education, health and fertility as well as the roles they play within the family, the community and society (Ghosh, 1987).

The present study is a micro level study. Micro level study means the study of a population or a community in a particular region, as small enough that can be studied by an investigator over a period of few years. This type of study can produce more meaningful results and such empirical accurate studies can form basis to further strengthen the theoretical framework, anthropologically saying, importance lies in understanding population dynamics at micro level.

During the course of the study an effort was made to achieve the aims by fully recording relevant information. However, some problems were faced in the field while collecting / recording the information. The present study is relevant as it is of interest to understand the dynamics of population such as fertility, mortality, knowledge and practice of family planning, status of reproductive and child health in a population through micro level study. Such study would give an insight into the phenomenon and provide some vital statistics about the Chenchu community, which is one of the tribal populations residing in Andhra Pradesh. The present study attempts to highlight overall population problems of Chenchu and target difficult areas so as to overcome them. Keeping this in mind, a field study was conducted on the Chenchu Villages in Andhra Pradesh. Such intensive small-scale studies are expected to be academically important in enhancing knowledge of the complexities of the population change and also interplay of various determinants influencing them. Furthermore, such studies are practically important as they may help to formulate plans and policies of specific regions and to identify high risk population group among whom programmes should be directed on a priority basis and areas which need special intervention. It assumes great significance as it focuses on different demographic aspects of the area and interplay of various determinants affecting population dynamics. In the present study, it is expected that demographic indicators may be inversely proportional to the social economic and cultural factors prevailing in the society. Thus in the present study an attempt is made to have a comprehensive data on Socio-Economic, Cultural and Biological Factors Affecting Reproductive Morbidity among Chenchu Tribal Women in Andhra Pradesh.

Chapter-3
RESEARCH METHODOLOGY

Chapter-3
Research Methodology

This chapter discusses the methodology of the study. The study population and data source are discussed. Variables used in the analysis are also presented. The study hypotheses are stated. Scope and limitation of the study, plans for utilization and dissemination of the result as well as procedures for data management and analysis are also highlighted.

The present topic under investigation is of utmost importance. Fertility is slightly higher in the consanguineous groups than in the non-consanguineous groups due to lower age at marriage among the tribal groups. Biological as well as socio-cultural factors are responsible for the differential fertility and mortality among human populations. Research studies (Meerambica *et al.*, 1999; Das and Goswami 2004; Hammami 2005; Al- Kandari 2007; Bosch 2008; Koc 2008) repeatedly emphasize that biosocial variables like age at menarche, age at marriage, type of marriage, economic levels, education and birth control methods have significant influence on the fertility and mortality of a population. So far no social sciences research work has been reported on Chenchus tribal group of Andhra Pradesh. Therefore, there is a need to attempt study on Bio-Social Determinants of Reproductive Performance among the Chenchus (Scheduled Tribe) Community of Andhra Pradesh. The present study will contribute to the existing literature by providing the measurement scale on the various determinants of demographic processes and a structural model showing the causal relationship.

3.1 Motivation of the Study

The present study is expected to highlight some social, economic, and biological factors affecting maternal and child health of the Chenchus of Andhra Pradesh. It would also provide useful demographic information about the population to facilitate other researchers working in this field. This study is expected to generate data bank for intellectual inquiry besides providing essential information for governmental population planning and health policies in the state.

3.2 Scope of the Study:

The present study is limited to the socio-economic, cultural, and biological factors affecting reproductive morbidity among tribal women. This study has tried to determine the factors and develop the measurement scale for the various variables that come under socio-economic, cultural, and biological factors. Theoretically the study works upon Biological Factors affecting

the demographic process, Social Cultural factors affecting the demographic process and Economic Factors affecting the demographic process. The women population that has been covered is Chenchus of Andhra Pradesh. The study focuses to develop a scale on Biological, Socio-Cultural and Economic Determinants and find the impact of these variables on Demographic Process through Structural Equation Modeling.

3.3 Objectives of the Study:

1. To understand the bio-social determinants of demographic processes such as fertility, mortality and morbidity
2. To understand the bio-social determinants of maternal and child health
3. To understand the overall health seeking behaviour of the Chenchus (Scheduled Tribe) Community of Andhra Pradesh State

3.4. Theoretical Framework of the Study:

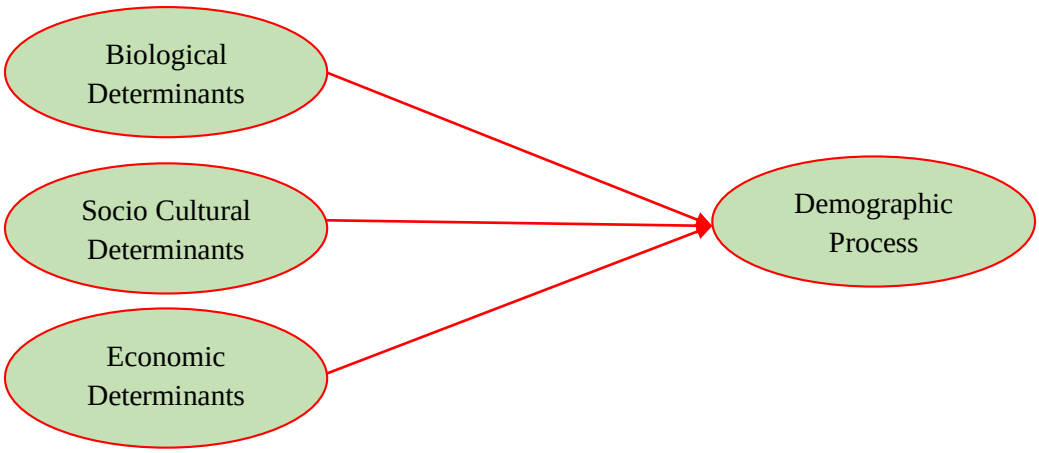

Figure 3.1 Theoretical Framework of the Study

3.5. Hypotheses of the study:

H_0 Biological Determinants does not influence the Demographic Process

H_1 Biological Determinants influences the Demographic Process

H_0 Socio Cultural Determinants does not influence the Demographic Process

H_1 Socio Cultural Determinants influences the Demographic Process

H_0 Economic Determinants does not influences the Demographic Process

H_1 Economic Determinants influences the Demographic Process

3.6. Research Design, Sampling Design and Sample Size:

This study is based on the empirical evidences and the nature of the study is descriptive. A descriptive study is known for establishing the relationships among the various variables and establishes the unknown relationships among the variables. Generally, the input of a descriptive study is an exploratory study or other descriptive study. There were many similar and good studies under the present study. The other aspects of the for the purpose of the study both the primary data was collected from the Chenchus community of Andhra Pradesh. The currently married women of the age group between 13 to 45 years were chosen as the respondents. A pretested structured schedule was used to retrieve the information on demography by assuming random sampling method and consequently drawing pedigrees of the families. The sample size for the present study is 424. The total sample size was taken as 500, however, while conducting the field survey, not all schedules could be filled, and some of them were not found fit for the study. The sampling tree below shows the detailed information about the same:

3.6.1. Instrument Development:

The instrument was developed with the help of the different variables extracted from the extant literature. The literature provided a large number of those aspects, which determines the biological, social cultural and economic determinants of the Demographic process, which includes morbidity and other conditions among the tribal women.

There were four constructs of Biological Determinants, namely Health During Pregnancy, Mishappenings and Diseases, Pregnancy Cycle and Baby Health. The reliability of these constructs were found 0.875, 0.920, 0.886 and 0.884 respectively. There were five constructs of Socio Cultural Determinants Namely Home Remedies, Marriage and Reproductivity, Education Social and Cultural Rigidity and Scientific Knowledge Avoidance. The reliability of these constructs is 0.811, 0.913, 0.952, 0.809 and 0.819. The economic determinants and demographic processes were constituted by one construct each and the reliability of the constructs were found as 0.919 and 0.896.

3.7 Statistical Tools and Software used in the study:

A variety of statistical tools was used in the study to derive the meaning results and fulfill the objectives such as mean, Exploratory Factor Analysis, Confirmatory Factor Analysis (CFA), Structural Equation Modeling. The Software used for the study are SPSS 20.0 and AMOS 24.0. SPSS (Statistical Package for Social Sciences) was used to measure the Factor Analysis and Weighted Mean

and AMOS was used to determine the measurement model and Structural Equation Model.

Chapter -4
DATA ANALYSIS AND INTERPRETATION

Chapter -4
Data Analysis and Interpretation

4.1 Summary of Demographic Profile of the Respondents:

The present study is focused on women respondents only, hence in case of gender only women respondents were considered for the study. The total valid responses were obtained from 424 women respondents. Further, in the present study only those women were selected who are married and have kids.

With respect to the age profile of the respondents, it was found that 34.7% belongs to the age group of 13-18 years, among them 45.5% comes under the age group of 18-25 years, 8.2% are there from the age group of 25-35 years and the rest were from the age group of 35-45 years. Regarding educational profile of the respondents, it was observed that 69.0% were illiterates and 22.4% were literates. Among them 6.8% have the educational qualification of up to high school and rests 1.6% were intermediates.

In case of the age of the respondents it was seen that 27.6% were less than 15 years of age at the time of their marriage, 59.2% were having the age of 15-18 years and 8.2% between 19-21 years at the time of their marriage and rest 5.0% were above 22 years at the time of their marriage. Regarding age of the respondents at first time of their parenthood it has been observed that that 74.5% were belongs to the age group of 15-18 years at the time of their first parenthood, 22.0% were only 19-21 years old when they first become the parents and rest 3.5% were above 22 years of age when they first become the parents. Though all the women that were approached in the study were married at least once. However, 76.2% were married (living together), 18.6% were separated from their spouse and rest 5.2% were widows. With respect to the income profile of the women in the study, it was found that that 21.0% were having an income of Rs. 3000 and below per month, 27.4% were earning Rs. 3000 – 5,000 per month, 23.0% of them having an of Rs. 5001 – 10,000 per month, 14.9% earns Rs. 10001- 20000 per month and only 14.0% had an income of Above Rs. 20001 per month.

Regarding number of kids, it was found that 33.73% have 2 kids, followed by 24.76% who have 1 kid, around 18.40% have 3 kids. In addition, 15.80% women have 4 kids. 5.66% of the women have 5 kids and 1.65% have 6 or more kids. In case of experience of morbidity during the demographic process faced by the Tribal women, it was seen that 58.49% of the women have

faced major morbidity, 33.25% have faced minor morbidity and only 8.35% did not face any Morbidity. This shows the prevalence of morbidity among the Tribal women in India.

Regarding number of miscarriages during the demographic process, it was found from the study that 35% of them have faced 1 miscarriage however, 31.84% never faced any miscarriage. 18.40% faced 2 miscarriages and 10.14% faced miscarriages 3 times. 4.48% women faced the miscarriage more than 3 times during their demographic process. As per the study, 289 women out of the total 424 women faced the miscarriages. They were further investigated for mentioning the reasons of miscarriage. Table… shows the reasons of miscarriages. It may be seen from the Table that around 34% of the respondents faced obstructed labour and unsafe abortion. 27.59% faced the Hypertensive disorders of pregnancy followed by 21.46% who faced Anaemia or Rupture Uterus. Finally, 16.98% did not know the reasons for the same.

With respect to the age of the children at the time of death it was found that 32.31% of the children were neonatal at the time of death, whereas 26.65% were Infant followed by 13.21% who were under the age of five and 10.61% who were above the age of 5 years. However, 17.22% never had to face the sudden demise of the child. In this study out of the 424 women, 351 women had experienced the death of their children during the demographic process. From the analysis of 351 women it was found that 28% of them lost their child/children because of the Malnutrition and/or Wasting. 25.36% lost the children because of the 'Lack of proper medical facilities during delivery' followed by 24.50% who lost them due to the critical diseases and lack of medical facilities and lastly 22.22% lost children because of lack of vaccination

4.2 Biological Determinants

There are 4 factors out of 18 variables/statements. These factors represent the different variables that are highly correlated with each other. The 1st factor is constituted by 5 variables namely as Lack of proper/ nutritional food to babies, Poor health of the new-born babies, Poor Immunity of babies, Premature Birth of Babies and Irregular birth weighted babies. The construct has been named as '**Baby's Health and Malnutrition'.** The variance explained by this factor is 19.122% and the reliability coefficient of the factor is .874 which is more than the minimum desired value of reliability i.e. 0.7. 2nd Factor is constituted by 5 variables namely as Stress during pregnancy, Poor Medical Facilities during Pregnancy, Malnutrition during Pregnancy, Poor food habits of pregnant women and High exertion and workload. The construct has been named as '**Health during Pregnancy'.** The variance explained by this factor is 18.717% and the reliability

coefficient of the factor is .872 which is more than the minimum desired value of reliability i.e. 0.7. 3rd Factor is constituted by 4 variables namely as Miscarriages, Abortions, Sexually Transmitted Infections (STI) and Reproductive Tract Infections (RTI). The construct has been named as **'Mishappening and Diseases'.** The variance explained by this factor is 17.851% and the reliability coefficient of the factor is .914 which is more than the minimum desired value of reliability i.e. 0.7. 4th Factor is constituted by 4 variables namely as Early Age Pregnancy, back to Back Pregnancy, High number of pregnancies in lifetime, Poor knowledge and use of Contraceptives (Pills/Condoms etc./IUD). The construct has been named as **'Pregnancy Cycle'.** The variance explained by this factor is 16.071% and the reliability coefficient of the factor is .871 which is more than the minimum desired value of reliability i.e. 0.7. Figure 1 shows the confirmatory factor analysis for the same which was used for development of the scale on Biological Determinants.

Confirmatory Factor Analysis:

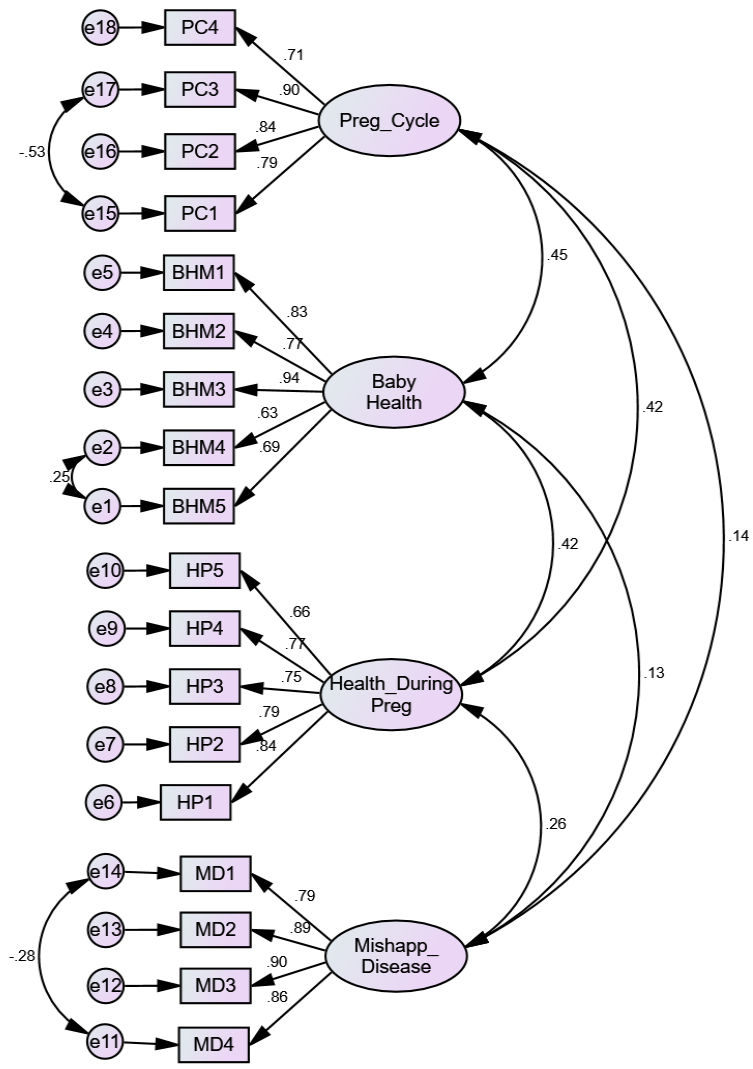

Figure 1 Measurement Model (CFA) for Biological Determinants

Table 1 specifies the model fit indices for the Confirmatory Factor Analysis (Measurement model). It may be seen from the Table that all the model fit criteria have been satisfied as per their desired values mentioned in the table, which proves that model is fit for the further analysis. RMSEA in the range of 0.05 to 0.10 is considered an indication of fair fit and values above 0.10 indicated poor fit (MacCallum et al, 1996).

Table 1 Model Fit Indices – Biological Factors

Model Fit Indices	Values as per Model	Criteria	Criteria fulfilled
CIMIN/DF	2.084	≤ 3.00	Yes
CFI	0.974	≥ 0.95	Yes
GFI	0.938	≥ 0.90	Yes
AGFI	0.916	≥ 0.80	Yes
RMSEA	0.051	≤ 0.10	Yes
P VALUE	0.000	≤ 0.05	Yes

Table 2 shows the validity measures of measurement model. It is found from the table that composite reliability is above 0.7. It establishes the convergent validity. Similarly, ASV (Average Variance Explained) is above 0.5, which also determines the convergent validity. However, AVE is above MSV (Maximum Shared Variance) and ASV (Average Shared Variance) which establishes the discriminant validity.

Table 2 Validity Measures of Measurement Model – Biological Determinants

Constructs under Biological Determinants	Reliability (CR)	Average Variance Estimate (AVE)	Maximum Shared Variance (MSV)	Average Shared Variance (ASV)	Convergent Validity	Discriminant Validity
Health During Pregnancy	0.875	0.586	0.175	0.139	Yes	Yes
Mishappenings and Diseases	0.920	0.743	0.068	0.035	Yes	Yes
Pregnancy Cycle	0.886	0.661	0.204	0.133	Yes	Yes
Baby Health	0.884	0.607	0.204	0.132	Yes	Yes

4.3 Social and Cultural Determinants

Development of the Factors/ Constructs

There are 5 factors out of 18 variables/statements. These factors represent the different variables that are highly correlated with each other. The 1st factor is constituted by 5 variables namely as Early age marriage that extents lifetime for reproductivity, Pressure of giving birth to child immediately after marriage, Family planning has no place in the society, Social status of Women is based her reproductive capability and Women's first and foremost responsibility is to giving birth to the children. The construct has been named as '**Marriage and Reproductively'.** The variance explained by this factor is 21.589% and the reliability coefficient of the factor is .916 which is more than the minimum desired value of reliability i.e. 0.7. 2nd Factor is constituted by 4 variables namely as Lack of education to Mother and family regarding demographic Process, Lack of correct knowledge regarding pregnancy and demographic processes due to social structure, Poor literacy/education of Tribal Women and Distorted and subjective knowledge regarding pregnancy and demographic process. The construct has been named as '**Education.** The variance explained by this factor is 18.549% and the reliability coefficient of the factor is .948 which is more than the minimum desired value of reliability i.e. 0.7.

3rd Factor is constituted by 3 variables namely as Following old rigid customs during whole demographic process, Social constraints in going outside for Medical advice / treatment during pregnancy and Any incident is considered as the result of antagonistic spirits. The construct has been named as **'Social Rigidity and Demographic Process'.** The variance explained by this factor is 12.781% and the reliability coefficient of the factor is .806 which is more than the minimum desired value of reliability i.e. 0.7. 4th Factor is constituted by 3 variables namely as Way of homely treatment includes cultural beliefs, Considering Disease as a common phenomenon and curing with Home remedies and Deliberate ignorance and avoidance of proper medical facilities during demographic process due to cultural and social rigidity. The construct has been named as **'Homely Treatments and Remedies'.** The variance explained by this factor is 12.598% and the reliability coefficient of the factor is .807 which is more than the minimum desired value of reliability i.e. 0.7. 5th Factor is constituted by 3 variables namely as Traditions and Customs supersedes over scientific knowledge, Ignorance to the scientific knowledge and Lack of Scientific Guidance regarding demographic Process. The construct has been named as **'Scientific Knowledge'.** The variance explained by this factor is 12.196% and the reliability coefficient of the factor is .848 which is more than the minimum desired value of reliability i.e. 0.7.

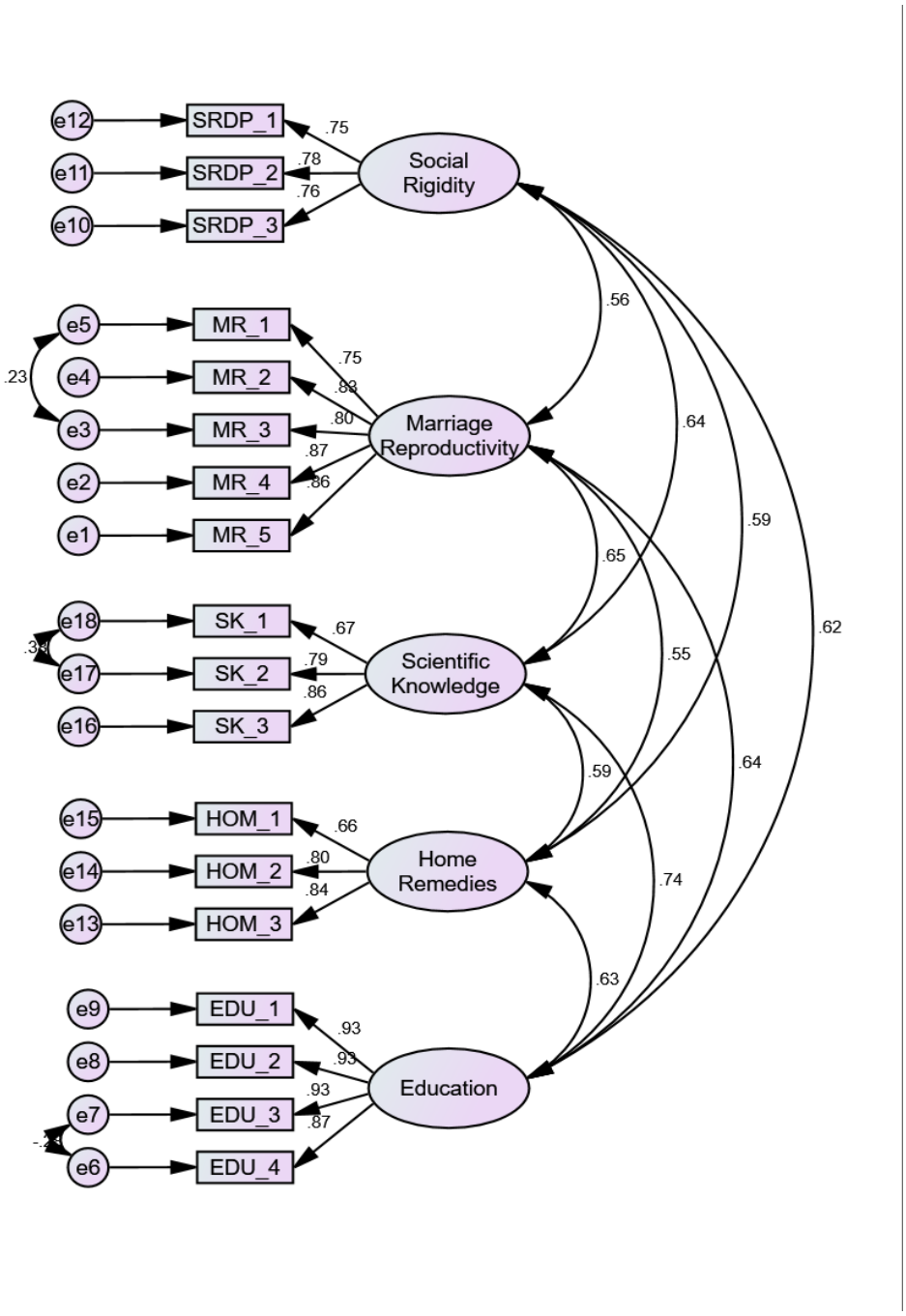

Figure 2 Measurement Model for Socio-Cultural Determinants

Table 3 specifies the model fit indices for the Confirmatory Factor Analysis (Measurement model). It may be seen from the Table that all the model fit criteria have been satisfied as per their desired values mentioned in the table, which proves that model is fit for the further analysis. RMSEA in the range of 0.05 to 0.10 is considered an indication of fair fit and values above 0.10 indicated poor fit (MacCallum et al, 1996).

Table 3 Model Fit Indices – Social and Cultural Determinants

Model Fit Indices	Values as per Model	Criteria	Criteria fulfilled
CIMIN/DF	2.029	≤ 3.00	Yes
CFI	0.977	≥ 0.95	Yes
GFI	0.940	≥ 0.90	Yes
AGFI	0.916	≥ 0.80	Yes
RMSEA	0.049	≤ 0.10	Yes
P VALUE	0.000	≤ 0.05	Yes

Table 4 shows the validity measures of measurement model. It is found from the table that composite reliability is above 0.7. It establishes the convergent validity. Similarly, ASV (Average Variance Explained) is above 0.5 which also determines the convergent validity. However, AVE is above MSV (Maximum Shared Variance) and ASV (Average Shared Variance) which establishes the discriminant validity.

Table 4 Model Fit Indices – Social and Cultural Determinants

Model Fit Indices	Values as per Model	Criteria	Criteria fulfilled
CIMIN/DF	2.029	≤ 3.00	Yes
CFI	0.977	≥ 0.95	Yes
GFI	0.940	≥ 0.90	Yes
AGFI	0.916	≥ 0.80	Yes
RMSEA	0.049	≤ 0.10	Yes
P VALUE	0.000	≤ 0.05	Yes

4.4 Economic Determinants

There are 1 factors out of 5 variables/statements. These factors represent the different variables that are highly correlated with each other. The 1st factor is constituted by 5 variables namely as Adverse Economic Condition to avail medical facilities, Lack of money to buy specific medicines to be taken pre, post and during pregnancy, Monetary constraints to buy healthy food

Women need to work in Farms etc. due to poor economic condition of family and Delay in treatment due to Lack of money. The construct has been named as '**Economic Determinants'.** The variance explained by this factor is 75.685% and the reliability coefficient of the factor is .919 which is more than the minimum desired value of reliability i.e. 0.7.

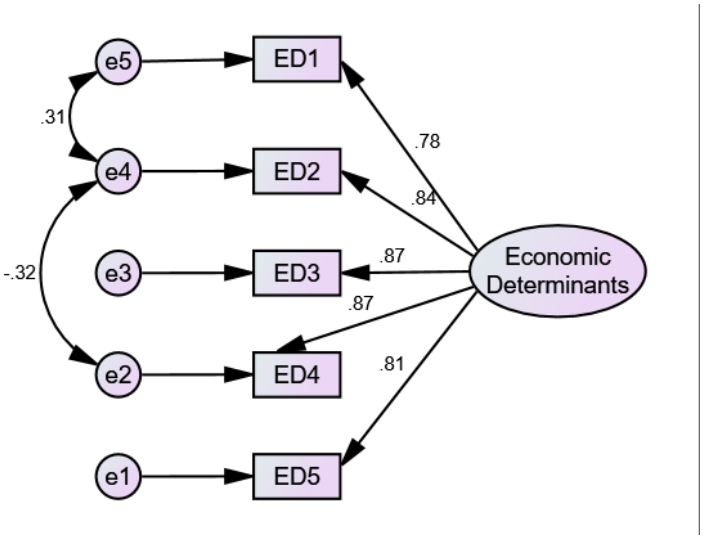

Figure 3 Measurement Model for Economic Determinants

Table 5 Model Fit Indices – Economic Determinants

Model Fit Indices	Values as per Model	Criteria	Criteria fulfilled
CIMIN/DF	2.763	≤ 3.00	Yes
CFI	0.997	≥ 0.95	Yes
GFI	0.992	≥ 0.90	Yes
AGFI	0.962	≥ 0.80	Yes
RMSEA	0.065	≤ 0.10	Yes

4.5 Demographic Process

There are 1 factors out of 5 variables/statements. These factors represent the different variables that are highly correlated with each other. The 1st factor is constituted by 5 variables namely as Condition of Women is Vulnerable with respect to the demographic processes, Going through demographic process is a tough journey for women, In Tribal setting demographic process is a nightmare for women, Mortality and morbidity are very common during demographic process and There is no positive development towards demographic process. The construct has been named as '**Demographic Process'.** The variance explained by this factor is 70.864% and the reliability coefficient of the factor is **0.896** which is more than the minimum desired value of reliability i.e. 0.7.

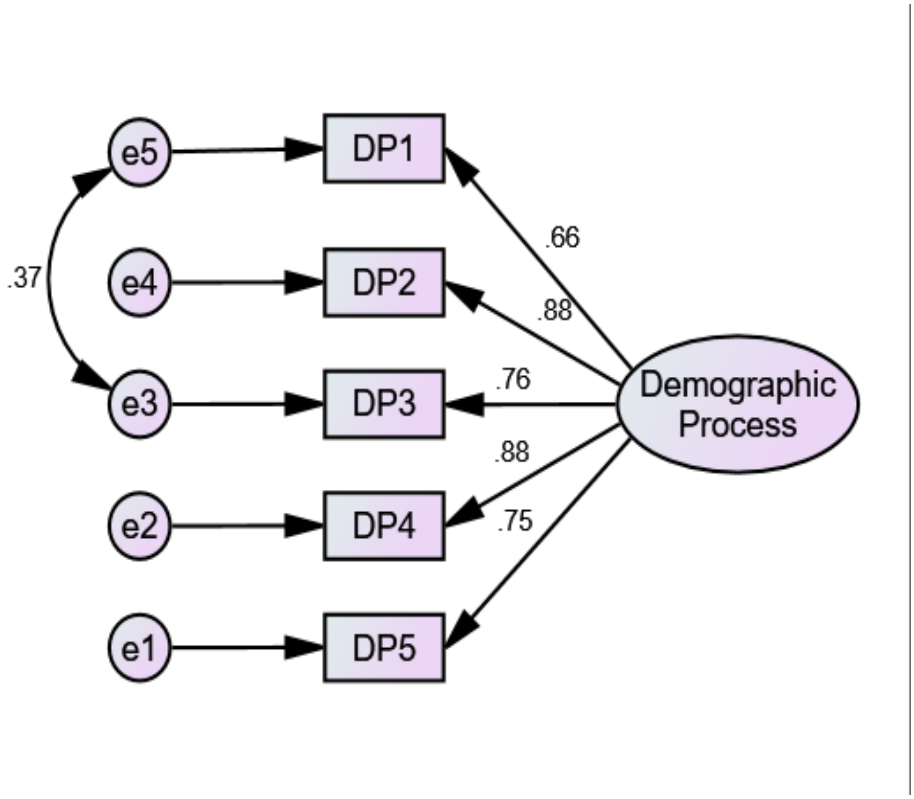

Figure 4 Measurement Model for Demographic Processes

Table 5 specifies the model fit indices for the Confirmatory Factor Analysis (Measurement model). It may be seen from the Table that all the model fit criteria have been satisfied as per their desired values mentioned in the table, which proves that model is fit for the further analysis. RMSEA in the range of 0.05 to 0.10 is considered an indication of fair fit and values above 0.10 indicated poor fit (MacCallum et al, 1996).

4.6 Impact of Biological Determinants on Demographic Process

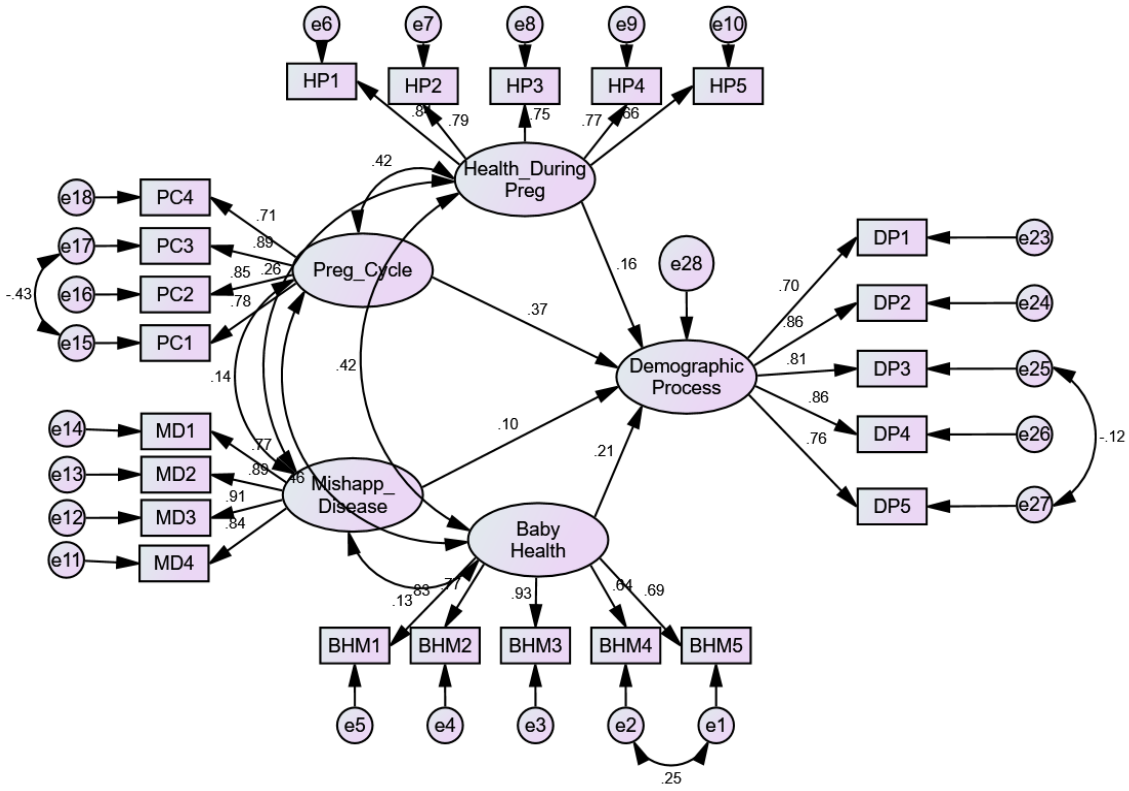

Figure 5 Structural Equation Model for Impact of Biological Determinants on Demographic Process

Table 6 Results of Structural Equation Model: Impact of Biological Determinants on Demographic Process

Causal Relationships	Estimate	SE	CR	P
Demographic Process <--- Health During Pregnancy	.158	.053	2.984	.003
Demographic Process <--- Pregnancy Cycle	.379	.059	6.445	***
Demographic Process <--- Mishappening and Diseases	.068	.031	2.188	.029
Demographic Process <--- Baby Health	.199	.050	3.990	***

Estimate – standardized beta, SE – Standard Error, CR – Critical Ratio (t – value in regression), Table 7 shows that results of Structural Equation Model regarding the impact of Biological Determinants on Demographic process. It is found that all the constructs of biological determinants have significant impact on the demographic process as the p value for all the relationships is below 0.05.

4.7 Impact of Socio-cultural Determinants on Demographic Process

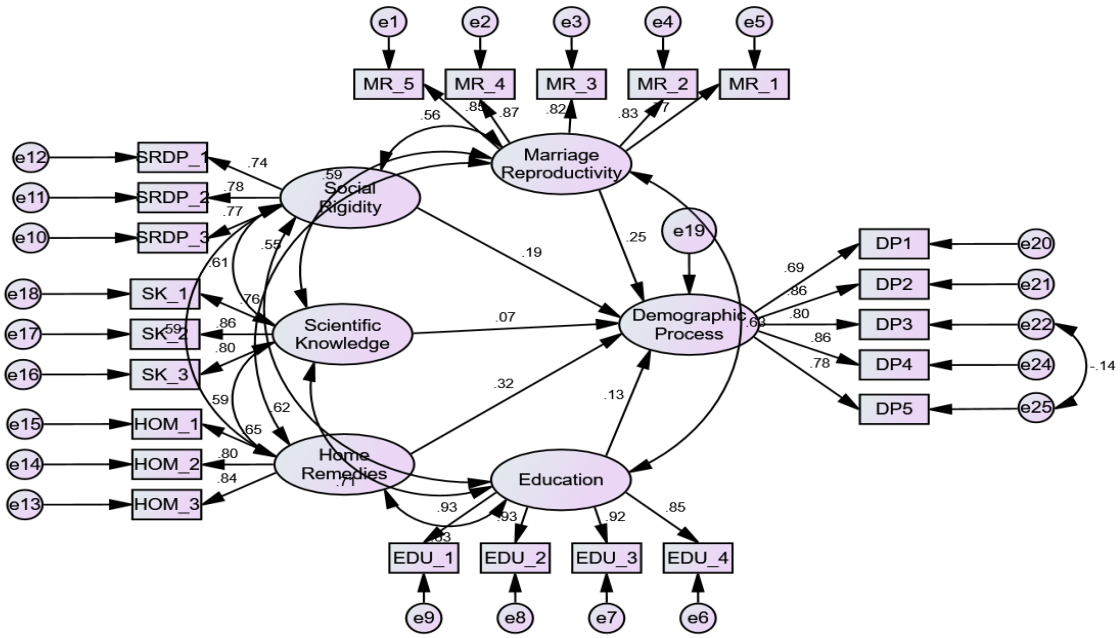

Figure 6 Structural Equation Model: Impact of Socio-Cultural Determinants on Demographic Process

Table 8 shows that results of Structural Equation Model regarding the impact of Socio-Cultural Determinants on Demographic process. It is found that the constructs like Marriage Reproductivity, Social Rigidity, Home Remedies and Education have significant impact on the demographic process as the p value for all the relationships is below 0.05. However, on construct such as Scientific Knowledge has no impact on demographic process (the p value is 0.295 which is more than 0.05).

Table 7 Results of Structural Equation Model: Impact of Socio-Cultural Determinants on Demographic Process

Causal Relationships	Estimate	SE	CR	P
Demographic Process <--- Marriage Reproductivity	.186	.040	4.633	***
Demographic Process <--- Social Rigidity	.180	.059	3.056	.002
Demographic Process <--- Scientific Knowledge	.066	.063	1.048	.295
Demographic Process <--- Home Remedies	.281	.054	5.234	***
Demographic Process <--- Education	.104	.049	2.129	.033

Estimate – standardized beta, SE – Standard Error, CR – Critical Ratio (t – value in regression),

4.8 Impact of Economic Determinants on Demographic Process

Table 9 Results of Structural Equation Model: Impact of Economic Determinants on Demographic Process

Causal Relationships	Estimate	SE	CR	P
Demographic Process <--- Economic Determinants	.668	.060	11.037	***

Estimate – standardized beta, SE – Standard Error, CR – Critical Ratio (t – value in regression),

Table 9 shows that results of Structural Equation Model regarding the impact of Economic Determinants on Demographic process. It is found that Economic Determinants have significant impact on the demographic process as the p value for the proposed relationships is below 0.05.

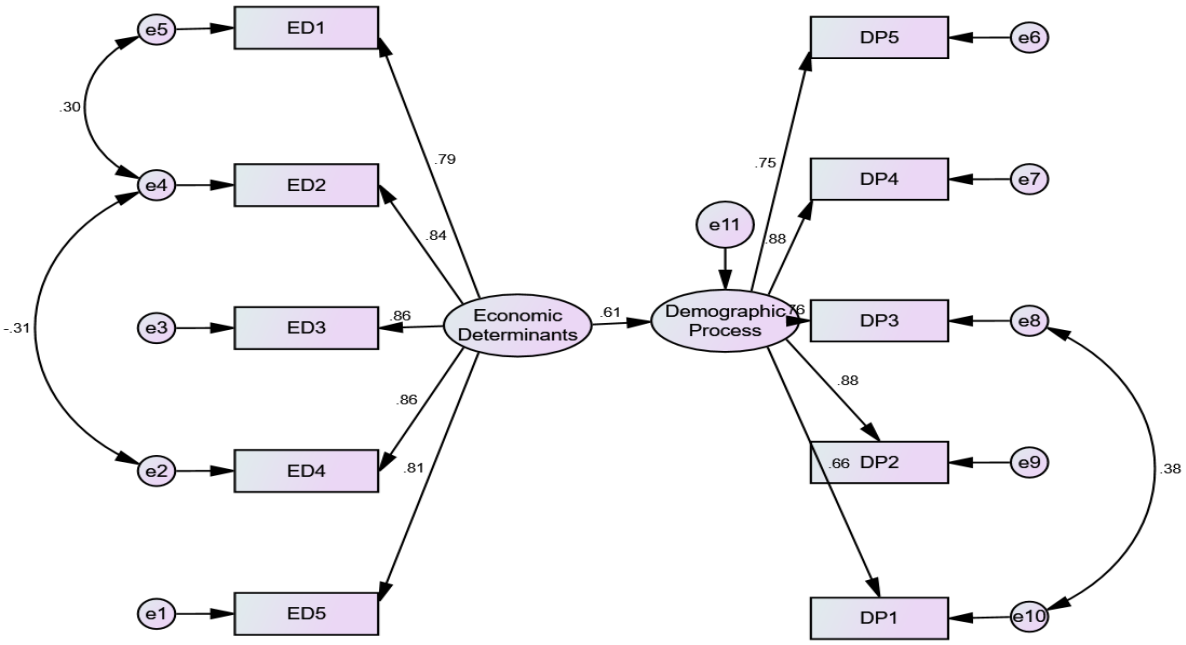

Figure 7 Structural Equation Model for Impact of Economic Determinants on Demographic Process

4.9 Efforts do you make to avoid fertility, mortality and morbidity; Kindly rate them as per the given scale

The various statements were used to investigate about the efforts done by people to avoid the issue of fertility, mortality and morbidity and it was found that the responses were not very exciting. The statement namely - "We meet the doctor for the kids when they are not well" rated with a neutral response (mean=2.91), another important statement is "During Period of Pregnancy women get the recommended food and nutrition" (mean=2.88), with reference to the health of the new born, the statement "We look forward to give our children good and healthy food after their birth" (mean=2.64), to avoid mortality, "We look forward to consult the doctor when not well during pregnancy" (mean=2.55), mother should take care at the time of pregnancy, "During period of pregnancy women get the recommended tablets/ medicines" (mean=2.53), nowadays, people don't believe in home remedies, "We look forward to avoid home remedies when the child's illness is severe" (mean=2.52), child health is the priority and can be seen in the statement "We have started giving vaccination to the Children" (mean=2.46), "We look forward to consult the doctor when not well" (mean=2.40), "Pregnant women get regular checkups" (mean=2.21), It is very necessary to change the mindset of people, "**There is a need to change the perspective towards health and medication" (mean=3.82)**

Chenchu depends on forest produces and their staple food.

Chapter -5

Conclusion, Recommendations & Limitation

Chapter -5
Conclusion, Recommendations & Limitation

5.1.1. Recommendations to Families:

- Tribal people should be incline scientific and formal education that to break the rigid, superstitious and orthodox means of following the already made rituals.
- Prejudice about anything related to the demographic process and medical requirements are not correct. However, but the tribal women are not known to it, which spoils their health in a very bad way.
- There is a very important role of husbands of the women, who are passing through the demographic process. Husbands must understand the importance of the health of their wives and medical requirement during the demographic process so that the future diseases can be avoided and healthy wife gives birth to Healthy child which results in the happiness of overall family.
- The tribal women and their family should connect to the mainstream media which keeps on guiding about family planning, health during pregnancy and all other related aspects to make the demographic process better.

5.1.2. Recommendations to Local Administration and Self Help Groups

There is a great role of self-help groups and local bodies in the development of tribal women including guidance regarding family planning and demographic process. Following recommendations have been made to the local administration and self-help groups:

- Social and cultural rigidity cannot be removed overnight however the self help groups can demonstrate scientific knowledge make the society aware about the importance of medical, care, hygiene and many other important aspects which need to be done scientifically rather than socially acceptable norms.
- Self-help groups and local administration can also collect the data of those women who are undergoing the demographic and reproductivity process and then find the problems such as abortions, back to back pregnancy, diseases and mishappenings.
- The local government can also contribute in making the tribal women and their families aware about the various government schemes.

- Education also plays an important role in developing and lifting up the living standards of people. To avoid the rigidness of social and cultural beliefs, the various stakeholders of the society and government should ensure it that the tribals connect to the modern and formal education.

5.1.3. Recommendations to the Government:

- The government should make sure that the official media channels such as governments radio broadcasting and National TV channels should talk about the importance of a planned and well-managed demographic process.
- The government policies should have special budget recommendations for free treatment of women struggling with any disease related to the demographic process.
- The birth and reproductivity is a mutual decision of husband and wife. If one is not ready, the other cannot forces. In case of Tribals, where the knowledge and awareness is less, and the government can recommend specific law regarding this, the legal awareness can be popularized with the help of local administration, and self-help groups.

5.2. Conclusion

It has been more than 70 years of the independence of India, but still there is certain section of the society, which is not independent of the orthodox cultural and social norms, old age thinking, and darkness of illiteracy and lack of modern and scientific education. Women have always been considered as the weaker gender and secondary person of the society. Tribal women have lack of education and due to social process they do not take their own decisions regarding, the demographic processes even if the suffer with the sexually transmitted diseases, back-to-back pregnancy, miscarriages and extended span of reproductively. There is a very high need for awareness to the tribal women, their family members, and society about the demographic processes so that this process may not become painful for the society. As found in the study, the women have not sure, that they would be enjoying a good, scientific, and formal demographic process, which is well planned. This section themselves have ignored the importance of proper demographic procedure like having gaps between two pregnancies, taking good food, rest, medicines and nutritional supplements.

The poor economic background and lack of education also play a significant role in the whole process. The tribal people have to first fight for their bread and butter and then they can

think about the education. The women also have to work at home, fields and do lot of work to earn livelihood of the family. Lack of education creates a problem of now knowing the importance and procedure of proper demographic processes. The women or family members who are not educated, subconsciously avoid the new knowledge and remain tied up in the orthodox system.

There is a need to break the completely vicious system of the tribal society and it is not possible in a day. The stakeholders and torchbearers of this reform such as local administration, government bodies, and self-help groups along with the village administration must make a relationship of confidence with the tribal families and women and make them aware about the benefits of proper family planning and importance of various biological, economic, and other determinants of the demographic process. The relationship of trust among all the stakeholders will be the key to win the battle of a better life of tribal women and good future to their kids and family members.

5.3. Limitations of the Study:

- The study is limited to the tribal area of Chenchus community of Andhra Pradesh; hence, the study may not be generalized on the other tribal communities.
- Primary data is always subject to the some biasness of the respondent. However, the researchers have considered all measures while selecting the respondents and judging for their answers, still biasness cannot be avoided completely.
- The primary data collected from around 424 women, however the sampling was random, the researcher do not claim that it will represent the chosen community completely.
- The study covers overall biological, economic and socio cultural factors of the demographic processes of the selected community and the impact of these factors on the overall demographic process, however, such issues may require in-depth studies also.

5.4. Scope for Future Research:

There is huge scope for further investigation in this area of research. The future research may be conducted on specific area such as reasons of back-to-back pregnancy, reasons of miscarriages or reasons not adopting the scientific and formal procedures of the demographic process. The future studies may also be conducted in the areas of role of self-help groups, government, and local administration in making the demographic process better. Similarly, the awareness of tribals about the schemes of government may also be investigated by researchers.

There are many other areas in which the future studies may be conducted. Malnutrition and the bad health of the children are again very important areas of research. The studies may be exclusively conducted to find the level of malnutrition in kids and the demographic processes adopted by tribal women.

Chenchu woman Education by NGO's

Chenchu women's collecting broom screws from the forest

References:

1. Al-Kandari Y. Y. (2007) Fertility and its relationship with socio-cultural factors in Kuwaiti society. East Mediterranean Health Journal, 13(6),1364-71.
2. Baral, R. (2017). Impact of Women's Education and Contraceptives use on Nepalese Fertility. International Journal of Perceptions in Public Health, vol. no. 1(4)
3. Baruah, R., Borah, M. (2017). Social determinants of morbidity during infancy: Results from a cross-sectional study in rural areas of Assam, India. Indian Journal of Child Health, vol. 4(1).
4. Beck, S., Wojdyla, D., Say, L., Betran, A. P., Merialdi, M., Requejo, J. H., Rubens, C., Menon, R., and Look, P. F. A. V. (2010). The worldwide incidence of preterm birth: a systematic review of maternal mortality and morbidity. Bull World Health Organ, vol. 88, pp. 31-38.
5. Birdi, T. J., Joshi, S., Kotian, S. and Shah, S. (2014). Possible Causes of Malnutrition in Melghat, a Tribal Region of Maharashtra, India. Global Journal of Health Science; vol. no. 6(5).
6. Bosch Alinda M, Frans J Willekens, Baqui Abdullah H, Jeroen KS, Van Ginneken, IngeHutter. 2008 Association Between Age at menarche and early life nutritional status in rural Bangladesh. Journal of Biosocial Science, 40, 223–237.
7. Cardoza, E. V. (2005). Partner Violence during Pregnancy Psychosocial Factors and Child Outcomes in Nicaragua. Umeå International School of Public Health Epidemiology and Public Health Sciences.vol. no. 976
8. Chakrabarti, A. (2012). Determinants of child morbidity and factors governing utilization of child health care: evidence from rural India. Applied Economics, vol. no. 44, pp. 27–37
9. Chander, R. (2012). Prevalence of Selected Acute Morbidities and Chronic Morbidities in Poor Adult Population of Delhi. Health and Population - Perspectives and Issues, vol. no. 36 (3 & 4), pp. 90-97.
10. Das, R, Goswami, M. (2004). Fertility Performance of a Tea Working Population of Dibrugarh District, Assam. *Journal of Human Ecology*, 16(2), 119-123.
11. Dhak, B. (2011). Relative Importance Of Socio-Economic Status And Accessibility To Health Facility In Using Maternal Health Care In Rural India. Health and Population Perspectives and Issues, vol. no. 34(1), pp. 11-18.
12. Hammami A, Chalbi N Ben, Abdallah M, Elgazzeh M 2005. Effects of Consanguinity and Social factors on Mortality and Fertility in Mauritania. Tunis Med, 83(4), 221-226.

13. Hanson, H. A, Smith, K. R. and Zimmer, Z. (2015). Reproductive History and Later-Life Comorbidity Trajectories: A Medicare-Linked Cohort Study From the Utah Population Database. Demography, vol. 52, pp. 2021-2049
14. Inamdar I. F., Sahu, P. and Doibale M. K. (2013). Gynaecological morbidities among ever married women: A community based study in Nanded city, India. Journal of Dental and Medical Sciences, vol. 7(6), pp. 05-11.
15. Ivanov. A. (2014). Chenchus of Koornul District: Tradition and Reality. The Eastern Anthropologist, vol. no. 67, pp. 3-4
16. Jat, T. R., Nawi, N., and Sebastian, M. S. (2011). International Journal for Equity in Health, vol. 10(59).
17. Jeffries, T. Y. (2012). Co-Morbidity and Other Complexities Affecting Black Women's Health. Rev Black Polit Econ, vol. no. 39, pp. 335–340
18. Kamal, S. M. M. (2012). Decline in Child Marriage and Changes in Its Effect on Reproductive Outcomes in Bangladesh. International Centre for Diarrhoea Disease Research, Bangladesh.
19. Kavitha, N. (2010). Is Young Maternal Age A Risk Factor For Sexually Transmitted Diseases And Anemia In India? An Examination in Urban and Rural Areas.
20. Koc 2008 . Prevalence and Socio-Demographic correlates of consanguineous marriages in Turkey. Journal of Biosocial Science, 40(1), 137-48.
21. Kumar, Y. A., Prabha D. S. and Chiranjeevi, CH. (2015). A Study on Tribal Living and Socio-Economic Conditions among East Godavari District in Andhra Pradesh. International Journal of Humanities, Arts, Medicine and Sciences, vol. no. 3(9), pp. 89-92
22. MacCallum RC, Browne MW, Sugawara HM. Power Analysis and Determination of Sample Size for Covariance Structure Modeling. Psychological Methods. 1996;1:130–49.
23. Meerambica M., Sachadeva M., P., Kalla A., K. (1999). Demographic profile of Bhattara, Tribal population of Nowrangpur district, Orissa. Anthtropologist, 2:133-137.
24. Mishra, M. (2012). Health Status and Diseases In Tribal Dominated Villages Of Central India. Health and Population - Perspectives and Issues, vol. no. 35(4), pp. 157-175.
25. Pradhan, S. K. (2013). Health And Health Seeking Behaviour Among The Tribals: A Case Study in Sundargarh District Of Odisha. National Institute Of Technology Rourkela
26. Prusty, R. K. (2014). Use of Contraceptives and Unmet Need for Family Planning among Tribal Women in India and Selected Hilly States. International Centre For Diarrhoeal Disease Research, Bangladesh, vol. no. 32(2), pp. 342-355.

27. Rao, P. D. (2019). Health Status and Use of Contraception among Particularly Vulnerable Tribal Groups in Visakhapatnam District of Andhra Pradesh, India. International Journal of Recent Technology and Engineering, vol. 7(6).
28. Rayhan, I., Khan, M. S. H. and Shahidullah. (2007). Impacts of Bio-social Factors on Morbidity among Children Aged Under-5 in Bangladesh. Asia-Pacific Population Journal, vol. 22(1).
29. Sanneving, L., Trygg, N., Saxena, D., Mavalankar, D. and Thomsen, S. (2013). Inequity in India: the case of maternal and reproductive health. The case of maternal and reproductive health.
30. Sensoy, Y. N., Korkut, Y., Akturan, S., Yilmaz, M., Tuz, C., and Tuncels, B. (2017). Factors affecting the Attitudes of women towards Family Planning. Open Access peer-reviewed Chapter.
31. Shahrawat, R., Meitei, M. H and Joon, V. (2014). Socio-Economic Disparity in Care-Seeking Behaviour For Ante-Natal Care And Pregnancy Complications Among Indian Women. Health and Population - Perspectives and Issues, vol. no. 37 (1 & 2), pp. 27-39
32. Sheheli, S. (2012). Improving Livelihood of Rural Women through Income Generating Activities in Bangladesh.
33. Shukla, J. (2016). Social Determinants of Urban Indian Women's Health Status. Indian Women's Health.
34. Singh, A. and, Kumar, A. (2013). Factors associated with seeking treatment for postpartum morbidities in rural India. Epidemiology and Health. vol. no. 36.
35. Singh, A. K. and Rajyalakshmi, C. (1993). Status of Tribal Women in India. Social Change. vol. no. 23(4), pp.3-18.
36. Steckel, R. H. (2008). Biological Measures of the Standard of Living. Journal of Economic Perspectives, Vol. 22(1) pp. 129–152.
37. Tiwari, N. and Devi, R. S. (2014). Factors Affecting Neonatal Mortality In A Hilly Area Of Northeast India: A Registry Based Study. Health and Population - Perspectives and Issues, vol. no. 37 (3&4), pp.129-140.
38. Vali, S. M., Kumar, O. A. and Padal. S. B. (2018). Studies on ethno-medicinal plants used by Chenchu tribals in Giddalur forest division of Prakasam District, Andhra Pradesh, India. International Journal of Research and Analytical Reviews, vol. no. 5(4).
39. Zahan, N. (2014). Factors Influencing Women's Reproductive Health. Bangladesh University of Engineering.